

Impact of Vibrotherapy along with Resistance Training Exercises in Improving Balance and Proprioception in Patients with Knee Osteoarthritis: A Study Protocol

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ABSTRACT

Introduction: Knee Osteoarthritis (OA) is a degenerative joint condition characterised by cartilage degradation, synovial inflammation, bone sclerosis and osteophytes formation. These alterations can damage sensory receptors, particularly mechanoreceptors, resulting in decreased proprioception. Vibration therapy has shown promise in improving balance and proprioception in various populations, however, limited evidence exists on the effectiveness of vibrotherapy in addressing balance and proprioception deficits in patients with knee OA.

Need for this study: The findings of this research will contribute valuable insights into the efficacy of local joint vibration therapy in managing the functional limitations associated with knee OA, reducing the risk of falls and ultimately improving the quality of life.

Aim: To determine the impact of local joint vibration therapy in improving balance and proprioception in patients with knee OA.

Materials and Methods: Study design is single blinded randomised controlled trial study. The sample size will be calculated after pilot testing. Participants recruited based on inclusion criteria will be randomly allocated into two groups, group 1 and group 2 through computer-based random allocation techniques. Group 1 will receive vibration therapy along with resistance training exercises and group 2 will receive sham vibration therapy along with resistance training exercises. Pre-test and post-test assessment will be done by Comprehensive Knee Osteoarthritis Index (CKOI) and Sensamove.

Keywords: Mechanoreceptors, Quality of life, Vibration.